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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/484,742	01/18/2000	Geoffrey B. Rhoads	60096	1046

23735 7590 10/20/2004

DIGIMARC CORPORATION  
9405 SW GEMINI DRIVE  
BEAVERTON, OR 97008

EXAMINER

PYZOCHA, MICHAEL J

ART UNIT PAPER NUMBER

2137

DATE MAILED: 10/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center"><b>Office Action Summary</b></p>	<b>Application No.</b> 09/484,742	<b>Applicant(s)</b> RHOADS, GEOFFREY B.	
	<b>Examiner</b> Michael Pyzocha	<b>Art Unit</b> 2137	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 June 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 26-70 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 27-49 and 65-70 is/are allowed.
- 6) ☒ Claim(s) 26 and 50 is/are rejected.
- 7) ☒ Claim(s) 51-64 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

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**DETAILED ACTION**

1. Claims 26-70 are pending.
2. The amendment of 06/10/2004 has been received and considered.

***Specification***

3. The specification is objected to under 37 CFR 1.75(d) for failing to failing to provide clear antecedent basis for the terms and phrases used in the claims. In particular, the specification fails to adequately link the corresponding structure, material, or acts in the specification with the particular means plus function limitations of claims 64-81 and 141-158. Per MPEP 2181, the Applicants are required to either (a) state on the record or (b) amend the specification to state the corresponding structure, material or acts to perform the recited function. MPEP 2181, p. 2100-219 particularly the paragraph beginning at the bottom of column 1 and ending in column 2.

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***Claim Rejections - 35 USC § 112***

4. In view of the amendment made to claims 47, 62 and 70, the rejection made in the earlier Office action for a 112 1<sup>st</sup> is hereby withdrawn.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claim 26 is rejected under 35 U.S.C. 102(b) as being anticipated by Schwab et al (U.S. 5,134,496).

As per claim 26 Schwab et al discloses a source of data corresponding to an audio signal (see column 3 lines 48-66); a detection system for generating a control signal from multi-bit auxiliary data embedded within the audio signal (see column 3 line 61 through column 4 line 5), the embedded auxiliary data being substantially imperceptible to a human listener of said audio signal (see column 4 lines 50-55); and means responsive to said control signal for inhibiting copying of said audio signal (see column 3 line 61 through column 4 line 5).

***Claim Rejections - 35 USC § 103***

13. Claim 50 is rejected under 35 U.S.C, 103(a) as being unpatentable over O'Grady et al. in view of Gniewek et al.

O'Grady et al. teach a method of decoding encoded video to extract multi-bit auxiliary data therefrom, the encoded video representing a video sequence including plural image frames (column 2, line 61; plural video frames mentioned), the multi-bit auxiliary data being steganographically encoded therein, the multi-bit auxiliary data thus being generally imperceptible to human viewers of the video sequence corresponding to the encoded video (lines 43-46 of column 1., the message data is embedded "unobtrusively"), the encoding taking the form of slight changes to portions of the video representing image information to thereby represent the multi-bit auxiliary data (column 1 , lines 43-53., the low-level waveform is added to the original video at a level significantly below the noise level, so that the changes made are small), wherein the method includes applying the encoded video to a matched filter processing unit (68 and 70 in figure 2., encoded video from 42 is input to 68., column 4, lines 13-17), applying a reference signal to the matched filter

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processing unit (reference waveform from memory 58 is also input to 68 in figure 2; column 4, lines 13-17), and processing plural frames of the encoded video with the processing unit to extract the multi-bit auxiliary data therefrom (68 and 70 operate to calculate a correlation coefficient by correlating each frame with the reference waveform and summing the correlation results to detect the embedded waveform; see column 3, lines 38-50 see also column 1 lines 56-64). O'Grady et al.'s system is explicitly for video, not audio like in the claims. Gniewek et al. teach that authentication materials, such as applicant's multi-bit auxiliary data, are useful in both audio and video data (lines 27-61 of column 8) and that techniques that generally apply to one will apply to the other. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply Gniewek et al.'s teaching of the versatility of watermarking techniques to O'Grady et al.'s system to create an audio corollary.

#### ***Response to Arguments***

7. Applicant's arguments filed on 06/10/2004 have been fully considered but they are not persuasive. The first

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argument (1), regarding the Section 112 rejections, has been considered and the rejections have been withdrawn based on applicant's amendments.

The second argument (2), regarding priority, has been considered and the rejection has been withdrawn based on applicant's argument.

The third argument (3), regarding the rejection of claim 26, has been considered and the Section 103 rejection has been replaced by a Section 102 rejection because of the withdrawal of the priority rejection. In the third argument applicant failed to argue the application of the prior art to the exact claim language. Applicant argued that Schwab et al failed to teach, "imperceptibly embedded signals to prevent copying", however the claim states the embedded data is "substantially imperceptible". Schwab et al discloses substantially imperceptible embedded data (see column 4 lines 50-55).

The fourth argument (4), regarding the Section 103 rejection of claim 50, has not been withdrawn. Applicant argues that O'Grady discloses less than a single frame while the applicant claims a plurality of series. O'Grady however, discloses such a plurality of series (see column 1 lines 56-64; where each video signal is made up of one or

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more frames and see column 1 lines 6-22; O'Grady's system is for television and when the channel is changed the decoder/detector receives a new signal which creates a series of signals.

#### ***Allowable Subject Matter***

8. Claims 27-49 and 65-70 are allowed.
9. Claims 51-64 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Pyzocha whose telephone number is (571) 272-3875. The examiner can normally be reached on 7:00am - 4:30pm first Fridays of the bi-week off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on (571) 272-3868. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJP

Andrew Caldwell  
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